Application No.: 10/571,426

AMENDMENT TO THE CLAIMS

The following claim listing replaces all prior listings and versions of the claims:

LISTING OF CLAIMS

1. (Currently Amended) A solid state imaging apparatus comprising:

a photoelectric conversion section formed in an imaging area of a silicon substrate, the photoelectric conversion section includes including:

a surface layer having a first conductivity type provided on a top portion of the silicon substrate.

a first semiconductor layer made of silicon having a second conductivity type, and service serving as a charge accumulation region, and provided under the surface layer, [[;]] and

a second semiconductor layer made of silicon having the first conductivity type provided under the first semiconductor layer;

an isolation region formed in at least one part of the silicon substrate located around the photoelectric conversion section, the isolation region being made of a silicon film material which fills an isolation trench formed on the semiconductor substrate;

a first silicon layer made of silicon having the first conductivity type formed in a region of the silicon substrate, and forming the bottom and sidewalls of the isolation trench; and

a second silicon layer made of silicon having the first conductivity type in contact with a bottom side of the first silicon layer,

wherein the photoelectric conversion section is in contact with the isolation region, the first silicon layer, and the second silicon layer, and

a depth of the isolation region is smaller than that of the first semiconductor layer <u>is</u> substantially the same as that of the second silicon layer. Application No.: 10/571,426

(Cancelled)

 (Currently Amended) The solid state imaging apparatus of Claim 1, further comprising an insulating film covering the bottom and sidewalls of the isolation trench.

4-5. (Cancelled)

 (Currently Amended) The solid state imaging apparatus of Claim 1, further comprising a MOS transistor formed in the imaging area,

wherein the <u>silicon film</u> isolation material contains an impurity of the opposite conductivity type to source and drain regions of the MOS transistor.

(Currently Amended) The solid state imaging apparatus of Claim 1, wherein
the <u>silicon film</u> isolation material is made of amorphous silicon, polycrystalline silicon or
porous silicon.

8-10. (Cancelled)

- (Previously Presented) A camera comprising the solid state imaging apparatus according to Claim 1.
- (Previously presented) The solid state imaging apparatus of Claim 1, wherein the silicon material contains no impurities.

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13. (New) The solid state imaging apparatus of Claim 1, wherein the second silicon layer is in contact with a side surface of the first semiconductor layer.